

OBITUARIES OF THE MEMBERS OF THE OHIO ACADEMY OF SCIENCE

REPORT OF THE NECROLOGY COMMITTEE, 2000

The Necrology Committee of The Ohio Academy of Science, chaired by Historian-Archivist Ronald L. Stuckey, consists of William R. Burk, University of North Carolina, Chapel Hill, NC, and Relda E. Niederhofer, Firelands College of Bowling Green State University, Huron, OH. Thanks are extended to those individuals who provided information to the committee. The committee is seeking volunteers to provide information or to write obituaries on deceased members of the Academy whose obituaries have not yet been written for *The Ohio Journal of Science*. Please contact The Ohio Academy of Science if you can assist in this effort. A two page outline of instructions for preparation of obituaries in *The Ohio Journal of Science*, written by Ronald L. Stuckey, is available from the author or the Academy office.

The following is a list of deceased members of the Academy with their field of interest, year joined, and date of death if known, whose obituaries have not yet been published in *The Journal*.

RONALD L. STUCKEY

NAME	DATE OF DEATH	YEAR JOINED
Harold E. Bigony	January 1998	1949
Robert Bowman	4 November 1996	1979
William F. Davis	3 January 1991	1967
Warren C. Ellis	11 August 1999	1960
Clara May Frederick	31 July 2000	1965
Ernest J. Klotz	9 July 2000	1968
George T. Jones	5 March 1998	1929
Gertrude Masters	9 February 1989	1951
Wallace H. Metcalf	12 May 2000	1980
Mark Schulzinger	9 February 2000	1966
James F. Smith	16 February 1991	1952
Paul B. Taylor	31 July 1989	1956

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Mortimer Warren Ake (1922-1996)

Mortimer Warren Ake, age 73, recently of Caldwell, OH, and long-time resident of Bedford, OH, died 4 April 1996, at Riverside Methodist Hospital, Columbus, OH. Serving as Staff Sergeant in the South Pacific during World War II, Ake provided numerous community services throughout his life. He joined The Ohio Academy of Science in 1995 with particular interest in the geological sciences.

Born 6 September 1922 in Magnolia, OH, Mortimer Warren Ake was the son of Lloyd Webster and Lucille Martha (Cowles) Ake. Known as Mort, he graduated from Bedford High School. After serving in the United States Marine Corps, Mort received a BS in geology (1949) from Adelbert College, Western Reserve University (now Case Western Reserve University). Among his Ohio work experiences were: employee in city services and management in Bedford and Cleveland; utilities director, City of Zanesville; and worker in the Noble County Health Department, Caldwell. Mort's contributions for civic causes were diverse and extensive. Among the organizations he assisted were historical societies, the YMCA, service clubs, the Red Cross (as a blood donor), tree plantings, planning commissions, the Washington Electric Co-Op, the Muskingum Area Technical College, the Six County Mental Health Board, Public Employees Retirement System, and any "Johnny Come in Handy Project" that was presented to him. He also enjoyed music, nature and the arts.

At the time of his death, Mortimer Warren Ake was survived by his wife Myrtle M. (Morgareidge) Ake whom he married 8 October 1955; daughter, Melissa Ake, Columbus; nephew, Sam Ake, and niece, Sue Balogh, both of Bedford. Mort was preceded in death by his brother, Samuel Ake. Memorial services were held at McVay-Perkins Funeral Home, Caldwell, 7 April 1996, with the Reverend Kenneth V. Kettlewell officiating. A private burial took place at Dudley Cemetery, Noble County, OH. Memorial contributions may be sent to the Noble County Historical Society, 51800 Mt. Ephraim Road, Sarahsville, OH 43779.

WILLIAM R. BURK

Stephen Wenham Barber (1910-1989)

Stephen Wenham Barber, age 79, retired scientist and former teacher and school administrator, died 30 April 1989, resulting from injuries after being hit by a car in front of his home. He frequently judged for the Junior Science and Humanities Symposium (JSHS). In honor of Barber, the Ohio JSHS established the annual Stephen W. Barber Award, presented to high school students excelling in science. He joined The Ohio Academy of Science in 1983 and affiliated with Science Education.

Born 21 April 1910 in Grand Rapids, OH, Stephen Wenham Barber was the son of John Jones and Lilly Susan (Spicer) Barber. He earned a Bachelor's degree (1933) from Bowling Green State University and a Master's degree in chemistry (1950) from the University of Toledo. Subsequently, in the mid-1930s, he taught elementary school in West Hope, OH, and later became a teacher and principal at Neapolis Elementary School, Neapolis, OH. In the early 1940s he worked for the Collector of Internal Revenue, Toledo, OH. During World War II, Barber worked for the former Martin Parry Corporation. For over 26 years he was a research scientist in fundamental physics with the former Owens-Illinois Glass Company Technical Center in Toledo, OH, until his retirement (1972). Among his research interests were studies on the structure and properties of vitreous silica and glasses.

Barber held membership in the American Ceramic Society, American Chemical Society, and the Technical Society of Toledo. He was elected to Sigma Xi. A member of the Epworth United Methodist Church, he was instrumental in establishing the church library.

Predeceased by his wife Clarice Barber, Stephen Wenham Barber is survived by his son Richard; sisters, Frances Daniels and Lois Bauman; and two grandchildren. Services were held 4 May 1989 at the Maison-Dardenne Mortuary, Maumee, OH. Memorial donations may be sent to the Church Foundation, Epworth United Methodist Church, 3077 Valley View Drive, Toledo, OH 43615-2237, or a charity of the donor's choice.

WILLIAM R. BURK

Harold August Bolz (1911-1999)

Harold August Bolz, age 88, Dean Emeritus of the College of Engineering and former Director of the Engineering Experiment Station at The Ohio State University and interim President of Ohio Northern University, died 27 October 1999 at the Healthcare Center at The Forum at Knightbridge, Columbus, OH. A registered professional engineer in Indiana and Ohio, Bolz was editor-in-chief of the reference book, *Materials Handling Handbook* (Ronald Press Company, NY, 1958), and the author of nearly 40 publications. In recognition of his numerous professional contributions and achievements in engineering and education, he was awarded Doctor of Engineering degrees from Purdue University (1964), and Tri-State University (1973) and an honorary Doctor of Humane Letters from Ohio Northern University (1980). Joining The Ohio Academy of Science in 1961, Bolz affiliated with Section Engineering, was elected a Fellow (1965), and was granted Emeritus status (1979). With Dr. Frank Jankowski he was instrumental in the establishment (1973) of the Academy's Section Engineering.

Born 27 May 1911, in Cleveland, OH, Harold August Bolz was the son of William and Amelia A. (Waechter) Bolz. His academic education in mechanical engineering was completed at Case Institute of Technology (now Case Western Reserve University) where he earned a BSME (1933) and an MSME (1935) and was an assistant in mechanical engineering (1933-1935). He served as development engineer (1935-1938) with the Weatherhead Company, Cleveland, OH, directing the Development and Testing Laboratory. He also completed additional graduate studies at Purdue University. Joining the faculty at Purdue, Bolz became an instructor (1938-1940) and assistant professor (1940-1942) of machine design, associate professor of mechanical engineering (1942-1946), and professor of industrial engineering and chairman, Department of General Engineering (1946-1954). Bolz's administrative abilities were then tapped by the College of Engineering, The Ohio State University, where he was named associate dean (October 1954), acting dean (March 1958), and dean (July 1958). Concurrently at OSU, he was also professor in the Department of Engineering and director of the Engineering Experiment Station (1958-1976). Upon retirement in 1976, Bolz was named Dean Emeritus of the College of Engineering at OSU and later became interim president of Ohio Northern University (August 1979-1980).

At Purdue and OSU, Bolz served on numerous university faculty committees. His primary research interests were machine design, industrial relations, and educational administration. In recognition of his accomplishments and service in engineering, Bolz received (1968) the Citation of the Ohio Society of Professional Engineers, the highest award granted by this organization. During his tenure at OSU, he had gained the high esteem of both his colleagues and over eight thousand graduates. In acknowledging Bolz's many years of leadership, including the expansion and modernization of the OSU College of Engineering, the Civil and Aeronautical Engineering Building was renamed (1989) Harold A. Bolz Hall on the Columbus campus. His alma mater, Case Western Reserve University, acknowledged his accomplishments with two special honors: the Distinguished Alumni Award, presented (1995) by the Undergraduate Alumni Association; and the Gold Medal Award, given by the Case School of Engineering and the Applied Sciences, in recognition of his contributions to advancements in engineering education and the professional development of young people in the field.

Among professional organizations Bolz held membership in the American Association of Land Grant Colleges and State Universities (chairman, 1964-1965), American Association of University Professors, American Association for the Advancement of Science (Fellow, 1954), American Society for Engineering Education (numerous committees and offices, 1944-1966; president, 1971-1972; Fellow, 1983), American Society of Mechanical Engineers (numerous committees and offices, 1949-1965; Fellow, 1962), Indiana Engineering Council (president, 1953-1954), Indiana Personnel Association, National Society of Professional Engineers, Ohio Society of Professional Engineers (Board of Directors, Franklin County Chapter, 1958-1960; vice-president, 1966-1967), Society for the Advancement of Management, and Society for the Promotion of Engineering Education (editor, Machine Design Clearinghouse Bulletin, 1944-1946). In honorary and fraternal societies he was elected to Pi Tau Sigma, Sigma Pi Fraternity

(Chapter advisor, 1940-1952; Board of Directors of House Corporation, 1940-1954), Sigma Xi, Tau Beta Pi (Alpha Chapter, 1945), Theta Tau, and Triangle Fraternities. He was also a member of the Lions International.

Outside academe, Bolz consulted and served industry and government. For numerous years he organized and directed the Maintenance Conferences for plant engineers of six manufacturing concerns. He was a member of the evaluation team for General Electric Company's Manufacturing Training Program (1953); Industrial Development Committee, Ohio Chamber of Commerce; Ohio Water Resources Board (1958-1959); Ohio Board of Voting Machine Examiners (beginning 1960); Advisory Committee on Engineering Education to Ohio Board of Regents; Water Management Advisory Board to Ohio Water Commission (beginning 1963); and Ohio Advisory Committee on Vocational Education (beginning 1964). He was a Trustee of the Edward F. Orton, Jr. Ceramic Foundation (1958-1976) and of Goodwill Industries of Central Ohio. Active in public and charitable commissions and boards, Bolz was also a member of the Columbus Rotary Club and Broad Street Methodist Church. Named Technical Man of the Year (1964) by the Columbus (OH) Technical Council, he was also one of seven educators appointed to the advisory committee of the United States Air Force Institute of Technology, serving as its chairman (1969-1970).

Harold August Bolz was predeceased by his wife Harriett Seymour (Hallock) Bolz, pianist and noted composer of music, whom he married 7 August 1937. Bolz is survived by sons, Dr. William Scott Bolz, Upper Arlington, OH, Dr. Everett Arthur Bolz, Charlotte, NC, and Eric Harold Bolz, West Palm Beach, FL; and five grandchildren. Memorial services were held 30 October 1999, with Reverend David Meredith officiating. Internment was at Union Cemetery, Columbus. Memorial contributions may be given to the Amelia and William Bolz Scholarship Fund, Case Alumni Association, 107 Crawford Hall, 10900 Euclid Avenue, Cleveland, OH 44106.

WILLIAM R. BURK

Kenneth Burdette Cummins (1911-1998)

Kenneth Burdette Cummins, age 86, Professor Emeritus and former acting chairman of the Department of Mathematics at Kent State University, died 13 May 1998 at Heartland of Bucyrus (OH), a skilled nursing care facility. Devoting his life to teaching mathematics in the public and academic classroom, Cummins earned great respect as an outstanding teacher and mentor to many Ohioans. He wrote a secondary school textbook, *The Teaching of Mathematics from Counting to Calculus* (1970), with Harold P. Fawcett. Eleven days before his death, he received an honorary doctorate from Tiffin University. He joined The Ohio Academy of Science in 1966, affiliated with Section Mathematics and Computer Science and was accorded Emeritus status (1989). His contribution to teaching mathematics extended to the Visiting Scientists Program of the Academy in which he presented over 35 lectures (1962-1966).

Kenneth Burdette Cummins, born 27 July 1911 in New Washington, OH, was the son of Royal Clinton and Pearl Rilda (Rittenour) Cummins. After graduating from high school (1929), he earned an AB in mathematics and chemistry (1933), Ohio Wesleyan University; MA in mathematics (1939), Bowling Green State University; and PhD in mathematics education and mathematics (1958), The Ohio State University. His master's thesis, "Twenty Seven Rulings on the Cubic Surface," was completed under the guidance of Professor Frank Ogg. His dissertation, finished under the advisorship of Harold P. Fawcett, was titled "A Student-Experience-Discovery Approach to the Teaching of the Calculus," and contributed toward two articles ("The Mathematics Teacher" 53:162-170. 1960 and "Texas Mathematics Teacher" Spring 1962).

His early teaching experiences (1933-1957) in mathematics, science, Latin, and orchestra were in the high schools of New Washington and Sulphur Springs, Crawford County, OH. In 1940 he took a break from school teaching to begin his doctoral studies in the Department of Mathematics at The Ohio State University where he served as a graduate assistant. Concurrently with his public school teaching he began again his PhD work at OSU in summer of 1953. He received the prestigious E. I. du Pont de Nemours and Company scholarship (1955-1956). At the Department of Mathematics, Kent State University, he advanced from assistant professor to professor (1957-1981), served as acting chairman (1964-1965), and was granted Emeritus rank. Although he retired from full-time teaching at Kent State in 1982, he continued teaching part-time until 1993.

Cummins focused his research on the teaching of calculus, the methodology of teaching collegiate and high school mathematics, and experiential approaches to mathematics education. Additional research interests were transformation geometry, history of geometry, projective geometry, and the computerization of geometry. Kenneth Cummins loved to teach. In fact, he was known not to place limits on the number of students wanting to take his classes, sometimes reaching 78 pupils. He used the inductive and discovery style of teaching mathematics by asking questions of the students and giving them problems to solve. The students thereby learned the subject material through their own discovery. Cummins was awarded grants from the National Science Foundation (NSF) to conduct 16 summer and 17 in-service programs for secondary teachers, beginning in the early 1960s. He was a frequent speaker at conferences and a presenter at workshops on mathematics and mathematics education. He also served on NSF proposal reading panels.

Cummins held memberships in the American Association of University Professors, Mathematical Association of America, National Council of Teachers of Mathematics (journal referee), and Ohio Council of Teachers of Mathematics. Among honorary societies, he was elected to Chi Gamma Nu, Phi Beta Kappa, Pi Mu Epsilon, and Sigma Pi Sigma. Several distinctive honors were bestowed on Cummins. He was the first person to receive the Ohio Council of Teachers of Mathematics' Christofferson-Fawcett Award for service in mathematics to the State of Ohio (1981). Twice, in 1968 and in 1975, he won the Kent State University Alumni Association Distinguished Teaching Award. He also received (1981) the KSU President's Medal for service to the school. In honor of Cummins' nearly three decades of training high school mathematics teachers, the Ohio Council of Teachers of Mathematics dedicated their 1998 Annual Conference to him.

Cummins contributed to civic events of the New Washington area. Besides teaching mathematics, Cummins, a trumpeter, was musically gifted. Every summer since 1934, he directed the New Washington Band in Saturday night concerts on the town square and for other area festivals. After organizing the New Washington Community Chorus in 1944, he directed various performances, including programs of Handel's Messiah and numerous cantatas and oratorios. Cummins was the choir director of the New Washington United Methodist Church. Under the sponsorship of the New Washington Centennial Committee, he wrote "Dutchtown: Your days in history; a complete history of New Washington and Cranberry Township" (1974).

Kenneth Burdette Cummins remained single his entire life. He is survived by his sister-in-law, Darlene Cummins, New Washington. In the spirit of his advocacy for excellence in teaching mathematics, Kenneth Cummins left \$10,000 to the Mathematics Education Trust for the National Council of Teachers of Mathematics. The trust presents scholarships to mathematics teachers, assists teachers in attending conferences, and provides funds for classroom activities. Memorial services were held 16 May 1998 at the New Washington United Methodist Church (NWUMC). Arrangements were by the Secor Funeral Home, New Washington. Memorial donations may be made to the Kenneth Cummins Scholarship Fund, in care of NWUMC (410 South Center Street) or to the New Washington Library (106 West Mansfield Street), both of New Washington, OH 44854.

WILLIAM R. BURK

Richard Bott Engdahl (1914-1999)

Richard Bott Engdahl, age 85, engineering consultant and former research engineer at Battelle Memorial Institute and long-time resident of Grandview Heights, OH, died 6 October 1999 at First Community Village Healthcare Center, Columbus, OH. An author of over 90 publications, primarily on combustion of solid fuels, and wastes and air pollution, Engdahl served as a consultant on local, national, and international projects. A pioneer in smoke-abatement research, he received numerous awards for distinguished service and contributions in his area of research. He joined The Ohio Academy of Science in 1964, affiliated with Section Engineering and Technology, participated in its Visiting Scholars Program

(1964), was elected a Fellow (1972), and chaired the Research Grants Committee (1974-1975).

Born 16 April 1914 in Elgin, IL, Richard Bott Engdahl was the son of Walter Frederick and Emma Mae (Bott) Engdahl. Raised in York, PA, he earned two college degrees in mechanical engineering, culminating with the BSME (1936), *magna cum laude*, Bucknell University and MSME (1938), University of Illinois. His masters thesis, entailing "Heat Loss from Ducts Carrying Heated Air," was completed under the direction of Professor Alonzo P. Kratz. Engdahl was a research assistant in the Department of Mechanical Engineering at Illinois (1936-1940), working on combustion and residential heating and cooling, and an instructor (1940-1941). In 1941, he joined the Battelle Memorial Institute, Columbus, OH, where he conducted research for over 36 years. Here he was research engineer (1941-1945); assistant supervisor (1945-1946) and supervisor (1947-1953), Fuels Research; chief, Fuels and Air Pollution Research (1953-1958); chief, Thermal Engineering Division (1958-1960); research associate (1960-1965) and fellow (1965-1976), Mechanical Engineering Department. Semi-retiring in 1976, he became an engineering consultant. He was an international consultant for the World Health Organization in Malaysia (1979-1980), International Executive Service Corps, Turkey (1980), and United Nations Development Program, China (1981).

Among Engdahl's major investigations at Battelle were the application of pulverized coal to metallurgical furnaces and to gas turbines; overfire jets for smoke abatement from coal-fired industrial boilers; combustion and gas flow in coal-fired and oil-fired steam locomotives distribution systems and flow measurement for pulverized, residential chimney performance; performance of steam jet ejectors, combustion in spreader stokers; environmental control; and air pollution studies. His research earned him prestigious honors. He received the Percy Nichols Award, given by the Fuels Division, American Society of Mechanical Engineers and the Coal Division of the American Institute of Mining, Metallurgical and Petroleum Engineers at the American Power Conference, Chicago (April 1979), in recognition of his research on smoke abatement and combustion in spreader stokers and incinerators. Recipient of The Chambers Award, given by the Air Pollution Control Association, Engdahl was also designated Diplomate, American Academy of Environmental Engineers. Recognizing his engineering expertise, the City of Columbus (OH) hired him to ensure that its then newly constructed trash-burning power plant operated correctly. The City subsequently bestowed on Engdahl the Christopher Columbus Achievement Award (August 1984).

Engdahl held memberships in the Air and Waste Management Association, Air Condition Engineers, Air Pollution Control Association, American Association for the Advancement of Science (Fellow), American Industrial Hygiene Association, American Meteorological Society, American Society of Heating, Refrigeration and Air Conditioning Engineers (Fellow), and American Society of Mechanical Engineers (Fellow; past chairman, Board of Technology). Among honorary societies he was elected to Pi Mu Epsilon, Sigma Xi, and Tau Beta Pi. He received Distinguished Service Awards from the Bucknell Alumni Association (1972) and the College of Engineering, University of Illinois. A long-time supporter of the Columbus Symphony and many charities, Engdahl was a member of the First Community Church, Men's Wednesday Breakfast Group, Cliff/Height's Senior Center, and Battelle Senior Associates.

Richard Bott Engdahl is survived by his wife Helen Keller (Klaas) Engdahl whom he married 21 November 1940; son, Eric Engdahl, Columbus; foster-sons, Mac Kaiser, Alpharetta, GA, and Kim Kaiser, San Diego, CA; six grandchildren; sister, Rosemary Rentzel, and brother, James Engdahl, both of York, PA. He was predeceased by his daughter, Karen Engdahl. Memorial services were held 17 October 1999 at First Community Church with Reverend Barbara Cunningham officiating. Arrangements were by Deyo-Davis Funeral Home. Memorial donations may be sent to World Neighbors, 4127 NW 122 Street, Oklahoma City, OK 73120-8869.

WILLIAM R. BURK

Tharl Richard Fisher (1921-2000)

Tharl Richard Fisher, age 78, botanist, former professor of botany, The Ohio State University, professor emeritus of biology, Bowling Green State University, and a past president of The Ohio Academy of Science, died from a heart attack 11 February 2000, in Queenstown, New Zealand. He was on a group tour of New Zealand and Australia with his wife, Charlotte.

As a member of the Academy since 1956, Fisher gave unselfishly of his time and enthusiastic energy in support of various Academy programs. He was elected a Fellow (1959) and served as a member of the Academy's executive committee, as vice-president of the plant sciences section (1965-1966), and became president (1980-1981). His presidential address, "Ohio's promiscuous sunflowers," was delivered at the Annual Meeting of the Academy, Wooster College, Wooster, Ohio (1981), and was published in *The Ohio Journal of Science* (81:146-152. 1981). While on the faculty at The Ohio State University, he and his students presented research papers at the Academy's annual meetings, in addition to his moderating contributed paper presentation sessions, and leading botanical field trips.

Fisher was named chairperson of the Ohio Flora Committee (1958), a committee of the Academy, charged with the mission of publishing a four-volume set of books on the vascular flora of Ohio. The committee, founded in 1950 by the late E. Lucy Braun of the University of Cincinnati, and who served as chairperson until Fisher's appointment, authored two books, *The Woody Plants of Ohio* (1961, reprinted in paperback, 1989) and the *Monocotyledonae*, Volume 1 of the *Vascular Flora of Ohio* (1967), both published by The Ohio State University Press. Fisher, while committee chairperson, established in 1966 an agreement with The Ohio State University Press for publication of the volumes of the *Ohio Flora*. Fisher's contribution was his book, Volume 2, the *Vascular Flora of Ohio, Volume Two: The Dicotyledoneae of Ohio, Part Three: Asteraceae*, also published by The Ohio State University Press (1988).

T. Richard Fisher, an experimental plant taxonomist specializing in *Heliopsis*, *Silphium*, and other related genera of the Compositae, was a vibrant, energetic, friendly individual who loved plants. He imparted that genuine enthusiasm to his general botany classroom and horticulture students, a large number of whom decided to pursue a major in botany or horticulture and who then continued with related life careers.

Born 23 December 1921 in Brownstown, Fayette County, IL, Fisher was the son of Homer and Melva Alice (Crawford) Fisher. Following his elementary education in Mahon School in Brownstown and McKinley School in Vandalia, Fisher attended Vandalia High School (1936-1940), where he was active in the science club, thespians, yearbook, and athletics. After graduation (1940) he entered Eastern Illinois State Teachers College, Charleston, and actively participated in the Science Club, the Eastern State Club, President of the Freshman Class, Phi Sigma Epsilon social fraternity, Boy Scout leader, and writer of sports articles for four newspapers. After three years in college, Fisher was called to active duty in the US Army during World War II and served for three years (1943-1946), attaining the rank of First Sergeant. Upon discharge from military service, Fisher returned to his undergraduate school and completed his studies in botany, zoology, and physical education, earning a BS at Eastern Illinois State (now University) Teachers College (1947). He taught classes in general biology and physical education (1947-1950) at Stockton High School in Stockton, IL, and was the school's athletic director and coach for teams in football, basketball, and baseball. He had good players and winning teams, including a conference championship in football.

In the spring of 1950, Fisher entered the graduate program in botany at Indiana University where he was a graduate assistant in the Department of Botany and allowed to proceed directly to the PhD degree, which he earned four years later (1954). His dissertation, on the systematics of the genus *Heliopsis* (Compositae) was completed under the guidance of Charles B. Heiser, Jr. and published in *The Ohio Journal of Science* (57:171-191. 1957). In addition, he had four short journal articles that included the names and descriptions of two new species, *Heliopsis rubra* (1954) from Baja California and *H. pulchra* (1961) from Chiapas, Mexico. In a memo of 29 March 2000, Professor Heiser recalls, "Dick was one of my early graduate students and I remember him vividly. He was always friendly, interesting, and fun to be with. One reason that we got along so well, I suppose, was that we had so much in common. Among other things Dick and I had both been athletes in high school and college and had coached basketball before going on for the PhD. Naturally, as his major professor, I was most happy and satisfied to see him have a successful

botanical career, as well as to provide me with a number of [graduate student] 'grandchildren'." Dick Fisher held teaching and research professorships at Appalachian State Teachers College (now University) in Boone, NC, (1954-1956), The Ohio State University (1956-1968), and Bowling Green State University, OH (1968-1988). Concurrently, he held academic positions as assistant professor of botany at Indiana University (summer 1956), consulting botanist to the AID India program while at OSU (summer 1966), and visiting professor of biology at Urbana College, Urbana, OH (spring 1983).

Fisher was hired by The Ohio State University at the instructor level in the Department of Botany and Plant Pathology to develop a viable, active, graduate-level program in plant systematics. He accomplished this mission in twelve years by (1) creating and teaching new courses in advanced plant taxonomy and biosystematics at the Columbus campus, and in field botany and aquatic vascular plants added to the curriculum at the University's field station, The Franz Theodore Stone Laboratory, (2) establishing a research program with over \$400,000 support from the National Science Foundation to study the systematics and evolution of the genus *Silphium* that resulted in six journal publications, (3) supervising eight MS and nine PhD degrees earned by thirteen students, and (4) making possible the hiring of Ronald L. Stuckey (1965) as an additional faculty member in the program. Fisher taught field botany and aquatic vascular plants, both at the Stone Laboratory, Put-in-Bay, OH. He served on numerous councils and committees, including the Graduate Council and Executive Committee of the Graduate School, the Honors Council of the College of Arts and Sciences, the Advisory and Organization Committee for the new College of Biological Sciences, and the Advisory Board of the University Press. Because of his wide University exposure, aggressive approach, and conclusive decisions, Fisher developed a very successful graduate teaching and research program that awarded him advancement from instructor (1956) to full professor (1964) in eight years while at The Ohio State University.

Dick Fisher was selected in 1968 as chairperson to develop a strong graduate program in the Department of Biology at Bowling Green State University, then the University's fastest growing department. Here with state of the art equipment and modern research facilities in a new \$4.5 million Life Sciences Building completed in 1966-1967, Fisher revamped the curriculum, hired several new faculty members, and prepared the documentation that culminated in the accreditation to the University to grant the PhD in Biological Sciences. Following resignation of the chair position in 1974, Fisher continued teaching there, at which time he designed and taught courses in Horticulture, and wrote a laboratory manual, *Introduction to Horticulture*, published by T. I. S., Bloomington, IN (1978, Rev. 1979). He officially retired in 1983, when he was named Professor Emeritus of Biology, but continued teaching part time until 1988.

Dick was an avid gardener. For 20 years, he persistently worked toward developing a special chrysanthemum that would bloom earlier and throughout "a full season." His early-blooming bronze chrysanthemums at the Schedel Arboretum caused many visitors to stop and take notice. Fisher became director of the Schedel Arboretum and Gardens in 1989 and was responsible for the expansion of the Japanese Garden and water gardens. The 17 acres is a northern Ohio showplace located in Elmore, OH.

For his contribution to the knowledge of the vascular flora of Ohio, Fisher was a recipient of the Herbert Osborn Award presented by the Ohio Biological Survey (1997). Two of his former students and colleagues, Niederhofer and Stuckey, dedicated their book, *Edwin Lincoln Moseley* (1998) to him. Fisher was elected to membership in Sigma Xi, Beta Beta Beta, and Gamma Sigma Delta. He held memberships in the American Horticultural Society, the American Society of Plant Taxonomists, the American Institute of Biological Sciences, the Botanical Society of America, and the International Association of Plant Taxonomists. Fisher also received a nomination for an outstanding teacher award at The Ohio State University (1964).

On 13 January 1944, T. Richard Fisher married Charlotte Mary Greene. She survives along with sons, Richard Michael of Newport, RI, and Jonathan Harold of Rocky River, OH; daughters, Ann Elizabeth (Fisher) Otley and Mary Charlotte (Fisher) Kirk, both of Bowling Green, OH; and eight grandchildren. On 26 December 1993 in Bowling Green, OH, Dick and Charlotte were surprised when their children organized a family dinner celebrating their 50th wedding anniversary.

An outdoor memorial service celebrating the life of Dick Fisher was held 21 May 2000 at the Schedel Arboretum and Gardens. Over 200 friends and relatives attended. Music was provided by a Toledo Symphony String Quartet and the Reverend John Block of the St. John's United Church of Christ in Elmore officiated. Oldest son, Richard Michael, spoke of reflections of his father, and Dr. Reginald Noble, current Director of the Schedel Arboretum and Gardens, and Professor Emeritus Ronald L. Stuckey of The Ohio State University, gave tributes to Dick's family and career.

Memorials may be made to the T. Richard Fisher Scholarship Fund at BGSU established in 1988 in his honor to benefit students with an interest in botany majoring in biology; the Schedel Arboretum and Gardens, or the Lake Erie Islands Historical Society at Put-in-Bay, where Dick organized a local Garden Club and designed and planted, during the past two summers, a beautiful garden in front of the Society's new building. The garden has been named "The Dick Fisher Memorial Gardens."

RONALD L. STUCKEY

Melissa Diane Mejía (1974-1998)

Melissa Diane Mejía, age 23, graduate student in environmental science at Miami University, Oxford, OH, died 1 July 1998 at University Hospital in Cincinnati where she had been air-lifted after sustaining head and leg injuries from a vehicle that hit her while bicycling to her off-campus apartment. Well-liked by faculty and students, Melissa pursued research in biological conservation, principally on sea turtles and coral reefs. In 1996 she joined The Ohio Academy of Science.

Born 20 September 1974 in Florida, Melissa Diane Mejía was the daughter of Cal and Kathryn Mejía. Raised in Medina and North Olmsted, OH, Melissa graduated June 1992 from North Olmsted High School. While studying at Hiram College where she earned a BS degree in biology (1996), she spent a semester studying biology while traveling through Australia. That defining experience set her on the path of research. She collaborated with Hiram College Professor Marty Huehner in a survey of freshwater unionid mussel species from the Wild and Scenic sections of Northeast Ohio's Grand River. With Huehner and Greg Zimmerman she presented the survey results at a poster session of the 106th Annual Meeting of The Ohio Academy of Science, held 4-6 April 1997, at Bowling Green State University. Huehner plans to publish the complete survey, with Melissa as a contributing author. During the summer of 1997, she conducted research at EnviroScience, Inc., in Stow, OH, participating in two projects, The Sandusky Project and the Allegheny River Basin Mussel Survey.

Melissa began her studies towards a Master of Environmental Science in the Institute of Environmental Sciences, Miami University, in August 1997. Her avid research interests were reflected in two discussion topics that she presented in Spring 1998: "Reproductive Biology and Nesting Behavior of Sea Turtles" and "The Use of Cyanide in the Live Reef Fish Trade." She participated in two summer field courses in Costa Rica and the Bahamas, one where she was a teaching assistant for Dr. Hays Cummins who observed her genuine and nascent interests in biological research. His words will be recognizable to those who knew her. "I remember seeing someone effortlessly snorkel down to the edge of the drop-off just above the coral heads. In that instant, that free spirited individual, so distant and isolated from the group, served as a 'bridge' between nature, displayed so beautifully beneath us, and humanity, as represented by the snorkelers on the water's surface. That person seemed one with the exquisite beauty of the place. That person was Melissa." Her journal describes that place, "If there is a heaven, it was out there."

Surviving Melissa Mejía are her parents in Pasadena, CA; sister Andrea; and brothers, Michael and Matthew. Memorial services were held 11 July 1998 at the Lake Erie Nature and Science Center, Bay Village, OH. A tree was planted in her memory near the Institute of Environmental Science. Memorial contributions may be made to the Nature Conservancy's coral reef preservation program.

WILLIAM R. BURK

Floyd Roger Nave (1925-1999)

Floyd Roger Nave, age 73, founder, former chairman, and Professor Emeritus of the Department of Geology, Wittenberg University, died 14 September 1999 in Oakwood Village, Springfield, OH. He served in the United States Air Force during World War II. Teaching at Wittenberg for over 35 years, Nave was known as the "Father of the Department of Geology." He joined The Ohio Academy of Science in 1954, affiliated with the Geology Section (vice president, 1962-1963), was elected a Fellow (1958), and accorded Emeritus status (1995). Supportive of the Academy, he contributed to its cause by teaching in the Visiting Scientists Program (1963, 1965, 1966) and serving on the Science Education Committee (1966-1970) and the Research Fund Committee (1972-1976; chairman, 1976).

Floyd Roger Nave, born 7 October 1925 in Moline, IL, was the son of Frank and Minnie (Lundeen) Nave. His college education culminated with three degrees, all in geology: an AB (1949), Augustana College; MS (1952), State University of Iowa (now University of Iowa); and PhD (1968), The Ohio State University. His Master's thesis focused on "The Geology of a Portion of the Bridge Range, Montana." Nave's doctoral dissertation, completed under the guidance of Aurele La Rocque, entailed the "Pleistocene Mollusca of Southwestern Ohio and Southeastern Indiana," and was published in part (*Sterkiana* Number 34, June 1969). He was an instructor in geology, Augustana College (February 1951-June 1952) and geologist, General Petroleum Corporation, Sacramento, CA (June 1952-August 1953). His research interests were in Pleistocene Mollusca and environmental geology.

Joining the faculty at Wittenberg University in the then new Department of Earth Sciences in 1953, Nave developed the geology curriculum, originally housed in the attic of Carnegie Science Hall, into the Department of Geology. He advanced through the academic ranks: assistant professor (1953-1961), associate professor (1962-1969), and professor (1969-1988). Awarded an NSF Science Faculty Fellowship, he took a leave of absence to spend the 1958-1959 academic year working on his doctorate at OSU. From 1959-1968, Nave continued his doctoral studies while maintaining his faculty position at Wittenberg. Concurrently he worked for the United States Geological Survey, first in uranium exploration in New Mexico (summer 1956), and then in geological mapping in Idaho with the Survey's Mineral Branch (summer 1957) and as a resident geologist on the Resource Staff, Holden Village, Lutheran Retreat Center, Chelan, WA (July 1971). Serving as chairman of Geology (1964-1970, 1971-1974), Nave was honored for over 25 years of service to Wittenberg University at the Founders Day celebration (1978). Retiring in 1988, he was accorded Emeritus rank in 1989.

An inspiring teacher, Floyd Nave also devoted a significant part of his academic career in promoting and developing Geology at Wittenberg. After joining the Wittenberg faculty, Nave was the sole teacher of Geology for nine years. Through his efforts, Geology had gained departmental status by 1964 and today is a strong academic unit. He taught courses, led field trips, and collected specimens. In a broader social context, he was deeply concerned about the role of geologists in insuring adequate supplies of raw materials, such as metals and minerals. He continuously focused on ways to improve and expand the geology curriculum. According to his published statements (*Wittenberg Alumnus* 19(2): 2-5, 1967), Nave wanted geology majors to have strong foundations for graduate school and future careers in geology and general students to obtain a rigorous, but interesting, introduction to geology that imparted a greater appreciation and respectful view about the earth and its precious resources. Through his commitment and dedication, Geology prospered at Wittenberg, attested by the fact that more than 160 geology majors graduated since Nave developed the Department of Geology. In recognition of his contributions in geology, the Floyd R. Nave Endowment Award in Geology was established in 1990 for providing financial assistance to enable students to devote full time to a research endeavor in geology.

He was a member of the American Association for the Advancement of Science, American Association of Petroleum Geologists, American Association of University Professors, Geological Society of America (fellow, 1972), and National Association of Geology Teachers (chairman, National Nominating Committee, 1962 and 1966; Editor, East-Central Section, 1967-1970). He was elected to Sigma Xi. An active member of the Grace Evangelical Church since December 1954, he served on its Council, and sang in its choir. He was also a member of the Springfield (OH) Men's Literary Club. He enjoyed summers with his family at his Minnesota cabin.

Floyd Roger Nave is survived by his wife Elizabeth (Thorsen) Nave whom he married on 27 August 1949; daughters, Lisa Buck, Minneapolis, MN and Miriam Holmes, St. Paul, MN; sons, Phillip Nave, Upper Sandusky, OH and Mark Nave, Minneapolis, MN; and ten grandchildren. Funeral services were held in Grace Evangelical Lutheran Church in Springfield, 17 September 1999, with Pastor Daniel M. Powell officiating. Arrangements were by the Littleton & Rue Funeral Home, Springfield. Memorial donations may be made to Wittenberg University, Department of Geology, Dr. Floyd Nave Scholarship Fund, 200 West Ward Street, or to Grace Evangelical Lutheran Church, 21 East Harding Road, both of Springfield, OH 45504.

WILLIAM R. BURK

Robert Swanton Platt, Jr. (1925-2000)

Robert Swanton Platt, Jr., age 75, Assistant Professor Emeritus of Plant Biology, former Assistant Dean of the Graduate School and Assistant Dean of the College of Biological Sciences at The Ohio State University, died 17 March 2000, at Mt. Carmel Medical Center, Columbus, OH. For 36 years Platt taught general botany and plant physiology at OSU. A first Lieutenant in the Army Air Corps, Platt served in the China-Burma-India theater during World War II. For his exemplary military service he was awarded the Air Medal and four stars. Joining The Ohio Academy of Science in 1957 and affiliating with Section Plant Science, he participated in the Visiting Scientists Program of the Academy (1962 and 1970).

Robert Swanton Platt, Jr., born 2 January 1925 in Chicago, IL, was the son of Robert Swanton and Harriet (Shanks) Platt. He graduated from the University of Chicago High School. After receiving an AB (1949) from Washington University, St. Louis, he earned an AM (1951) and a PhD in biology (1954) from Harvard University where he was a teaching fellow (1950-1953). His doctoral dissertation, focusing on "A Comparative Study of the Auxin Metabolism in Plant Tissue Cultures," was completed under the guidance of Professor Kenneth V. Thimann. After receiving his doctorate degree, he was awarded a Fulbright Fellowship (1954-1955) to conduct research in plant physiology at the Agricultural University of Wageningen, The Netherlands. His subsequent professional career was in the Department of Botany and Plant Pathology (later named the Department of Plant Biology), The Ohio State University, where he was an instructor (1956-1957) and assistant professor (1957-1991). At OSU, he held the administrative position of assistant dean and secretary of the Graduate School for the academic year 1964-1965 and assistant dean of the College of Biological Sciences (1966-1968). Concurrently, he was a Danforth Associate, beginning 1970. Although officially retiring in 1991, Platt continued to teach Plant Functions in the Environment. His research involved the metabolism of plant growth substances and light-growth reactions.

Platt held memberships in the American Association for the Advancement of Science, American Bryological Society, American Society of Plant Physiologists, Botanical Society of America, Ecological Society of America, and the Torrey Botanical Club. He was elected to the honorary societies: Gamma Alpha Society, Sigma Nu, and Sigma Xi. He was also a fellow (1958) of the Church Society for College Work at the Episcopal Theological Seminary, Cambridge, MA. Platt pursued several hobbies. Enjoying yacht racing and sailing, he was an advisor to the OSU Sailing Club. In the Audubon Society, he participated in the annual bird counts. Interested in wetlands conservation, Platt was a member of the Hoover Nature Commission, Columbus Recreation and Parks Department. He enjoyed playing his recorder and was an active member of the American Recorder Society.

Robert Swanton Platt, Jr. is survived by his wife Nancy (Gaines) Platt whom he married 3 February 1951; son, John Andrews Platt; daughter, Sarah P. Defourny; one sister, Nancy P. Rayfield; two nephews; and four grandchildren. Memorial services were held 22 March 2000 at St. Stephen's Episcopal Church, Columbus. Arrangements were made by Cook & Son-Pallay Funeral Home and Crematory, Columbus. Memorial gifts may be sent to the St. Stephen's Episcopal Church Music Fund, 30 West Woodruff Avenue, Columbus, OH 43210-1176.

WILLIAM R. BURK

John Franklin Schaff (1931-2000)

John Franklin Schaff, age 68, Professor Emeritus of Curriculum and Educational Technology, former Associate Dean for Undergraduate Studies and Associate Dean for Special Services and Development in the College of Education and Allied Professions at the University of Toledo, and former President of The Ohio Academy of Science, died 26 February 2000 in Gainesville, FL, following a brief illness. While serving in the US Army (September 1954-August 1956), he was a research assistant in plant physiology and enzymology at Fort Detrick, Frederick, MD. Long active in science education, Schaff secured over one million dollars in grant funds at Toledo. He co-authored a textbook with K.H. Niedfeldt and J. M. Brawlers titled, *Semimicro Experiments for the CHEM Study Program*, D.C. Heath, Boston, MA (1991; first issued, 1966).

Joining The Ohio Academy of Science in 1977, Schaff affiliated with Science Education, and was elected a Fellow (1991). As Academy president (1991-1992), he delivered the address, "Thinking and Brain Activity," presented at the Academy's one-hundred-first Annual Meeting on 2 May 1992, held at The University of Akron. The address is unpublished. Schaff held membership on the Academy's Executive Committee (1988-1994) and Council (1988-1994). Schaff was a local host for the Junior Academy Section at the Academy's Annual Meeting (25-27 March 1986), he was also director of the Junior Academy Council's Northwest District Science Day (1984-30 April 1990). Recognizing his meritorious contributions to education, The Ohio Academy of Science named Schaff Ohio's Outstanding University Educator of the Year in 1989.

Born 2 March 1931 in Elgin, IL, John Franklin Schaff was the son of John W. and Lois Eisler Schaff. After receiving a BS in biological science and physical science (1953) from Illinois State University, Schaff attended Kansas State University where he earned an MS in plant physiology and chemistry (1954) and was a research assistant (1953-1954). His Master's thesis, titled the "Translocation and Distribution of Radioactive Phosphorus in Wheat," was published (*Botanical Gazette* 118: 122-127, 1956) with J.C. Frazier, R.E. Hein, and R.H. McFarland. He won summer NSF fellowships to study acetoacetic decarboxylase of soil bacteria at Cornell University (1959) and the amino acid requirements of *Kloeckera* yeast at Illinois Institute of Technology (1960). While teaching in Florida, he also matriculated at Florida State University where he was a research assistant in science education (1967-1968) and received an EdD in science education (1968). Schaff's unpublished doctoral dissertation focused on the "Assessment of the Cognitive Ability Evaluation in Students of Conventional and Modern High School Chemistry." His early science teaching experiences in Illinois were at Proviso Township High School, Maywood (1956-1958), Maine Township High School, East Park Ridge (1958-1961), and Township High School District 113, Highland Park (1961-1965). Subsequently, he joined the faculty at North Florida Junior College, Madison, teaching chemistry (1965-1966) and serving as resource specialist and chemistry instructor (1966-1967). He was a National Teaching Fellow in Chemistry (Title III, Higher Education Act) in 1965.

Schaff's academic career focused on science and education. Following his assistant professorship in science education (1968-January 1972) at the Center for Science Education, Syracuse University, he joined the faculty in the Department of Curriculum and Educational Technology, University of Toledo, serving as associate professor (February 1972-1975) and professor (1975-1991). He was also Associate Dean for Special Services and Development (1978-1984) and Associate Dean for Undergraduate Studies (1984-1985) at Toledo's College of Education and Allied Professions. Concurrently Schaff was a visiting professor at the State University of New York, Geneseo (Summer 1970), University of Wyoming (Summer 1971), and Owens Technical College, OH (1972-1974). He was also a visiting scholar at Indiana University (Fall 1979) and The Ohio State University (Spring 1987). Upon being granted Emeritus status when he retired from full-time teaching at UT in 1991, Schaff then served as a superannuate professor (1991-1998), lecturing part-time in its Department of Chemistry. His research interests entailed semimicro experiments for high school chemistry, middle and junior high school curriculum development, computer applications to high school science teaching, brain physiology and learning science, and in recent years, brain mapping.

Throughout his career Schaff promoted and advanced the cause of science education. He served in numerous federal and state educational groups. In addition to his classroom teaching and administrative leadership, he made professional contributions by presenting papers on science teaching at national meetings and publishing articles. Since 1966, Schaff was a contributing author of secondary school science textbooks published by Silver Burdett and D. C. Heath. Organizing workshops on education and curriculum development, Schaff also was as a consultant in education for Silver Burdett Company, State University of New York at Geneseo; University of Michigan, Bureau of School Services; NASA-NSTA for Development of Skylab Student Curriculum Materials for Schools, and other institutions. He was director of the Grants Program for Teachers sponsored by the National Science Foundation (1971-1986) and participated (1974) in its delegation on a study of science education in France, Switzerland, Russia, and England. Professor Schaff provided learning experiences for teachers about NASA's aerospace ventures, directing the Region V, NSTA-NASA Space Shuttle Student Involvement Project (1980/1982-1982/1983) and the NSTA-NASA-UT Honors Teacher Workshops in Space Science (1984/1985-1985/1986).

John Schaff was particularly interested in helping students. He was national board chairman of the Junior Science and Humanities Symposium (JSHS). Serving as director of the Ohio JSHS Symposium (1988-1999), Schaff successfully procured grants from the Academy of Applied Science, Inc., to fund them. His dedication to these symposia rested in great part in his belief that high school students should be provided with experience in communicating and discussing their scientific research and findings to others.

He held membership in the American Association for the Advancement of Science (Fellow, 1971; chairperson, Section Q-Education, 1985-1986); American Association of Colleges for Teacher Education; American Chemical Society (chairman, Education Committee, Syracuse Section, 1971-1972; and chairman, Toledo Section, 1979-1980); American Educational Research Association; Association for the Education of Teachers in Science (president, 1978-1979), National Association for Research in Science Teaching; National Science Teachers Association (Board of Directors, 1978-1979, numerous offices); School Science and Mathematics Association, Inc.; and Society for College Science Teachers (charter member). Among honorary societies, Schaff was elected to Gamma Sigma Delta, Phi Delta Kappa, and Sigma Xi. Locally he held membership in the Technical Society of Toledo, serving as trustee (1983-1988).

John Franklin Schaff is survived by his wife Joanne Doris Schaff whom he married 17 April 1954; a daughter, Cheryl Lachowski; sons, Bruce Schaff, Michael Schaff, Potsdam, NY, and Steven Schaff, Gainesville, FL; and seven grandchildren. Also surviving are his mother and brother, Paul Schaff. Memorial services were held 3 March 2000 at Epworth United Methodist Church, Toledo, with the Reverend Ken Streitenberger officiating. Memorial contributions may be made to a charity of the donor's choice.

WILLIAM R. BURK

Wave Henry Shaffer (1909-1995)

Wave Henry Shaffer, age 85, Professor Emeritus of Physics at The Ohio State University, died 15 May 1995 at Wesley Glen Center, Columbus, OH. Advising over 30 students earning PhD and MSc degrees at OSU, Shaffer was noted for his research in the mechanics of rotating vibrating polyatomic molecules and interpreting infrared spectra. He wrote a three-volume textbook on "Introductory Quantum Mechanics," (1966). Joining The Ohio Academy of Science in 1948, Shaffer affiliated with Section Physics and Astronomy (vice president, 1953-1954), was elected a Fellow (1951), and accorded Emeritus status (1977).

Wave Henry Shaffer, born 23 May 1909 near Wauseon in Fulton County, OH, was the son of Bert Michael and Florence Holda (Boyers) Shaffer. Upon his graduation from Wauseon High School (1927), Shaffer worked as a church janitor in Wauseon (1927-1929). After earning an AB (1933) from Hiram College, he attended Williams College (1933-1934). He then matriculated at The Ohio State University where he received an MA (1936) and a PhD in physics (1939). Shaffer, in collaboration with Donald M. Cameron, jointly conducted research on their Master's thesis, "Raman Spectra as a Means of Studying Dissociation of Nitric Acid and Potassium Bisulfate in Aqueous Solution," completed under the direction

of Professor Alpheus W. Smith. Shaffer's doctoral dissertation, "The Rotation-Vibration Energy States of Certain Polyatomic Molecules," was completed under the guidance of Professor Harald H. Nielsen and Professor Lewellyn H. Thomas and was serially published (*Physical Review* 56: 188-202, 895-907, 1051-1059, 1939; *Journal of Chemical Physics* 9: 599-606, 607-615, 1941). He was a National Research Council Fellow at the University of Chicago (1939-1940), working on molecular spectroscopy with Dr. Robert S. Mulliken (later a Nobel Laureate). While a student at these respective colleges, he was a laboratory assistant (1931-1933), teaching assistant (1933-1934), graduate teaching assistant (1936-1938), and University Fellow (1939).

Shaffer joined the faculty in the Department of Physics, The Ohio State University, progressing from instructor (1940-1942), assistant professor (1942-1946), and associate professor (1946-1950) to professor (1950-1976). Serving as the department's executive secretary (1940-1948), he was a member of the OSU Faculty Council (1960-1976) and Council on Instruction (1958-1960). At retirement (1976), he was granted Emeritus status. Concurrently Professor Shaffer was a researcher, assisting in the development of proximity fuse devices, at the Applied Physics Laboratory, Johns Hopkins University, Silver Spring, MD (April-September, 1944 and 1945); consultant with the Office of Scientific Research and Development (1946-1950); and visiting professor in summers at the University of Colorado (1964) and at Dartmouth College (1965 and 1966).

In the classroom Dr. Shaffer was well-known for his animated teaching of two series of academic-year-long graduate courses in quantum mechanics and classical mechanics. He recommended that students take both of these courses in preparing for their careers in physics. An active organist who played for several churches since 1936, Shaffer liked teaching the physics of acoustics to students of music and speech. Outside the physics laboratory, his contributions to OSU were numerous: Board of Directors, Institute of Polar Studies; Faculty Council; Graduate Council; Council on Instruction; Curriculum Committees at the department, college, and university level; and membership on hundreds of examining committees for Master's and Doctoral Candidates.

Among his memberships in professional societies were the American Association for the Advancement of Science (fellow), American Association of Physics Teachers, and American Physical Society (fellow; member, Division of Chemical Physics; secretary-treasurer and recipient of the Howard Maxwell Award (1983) of its Ohio Section). In honorary clubs he was elected to Sigma Xi, serving as OSU Chapter president (1969). An elder in the Indianapolis Presbyterian Church, he also held memberships in the Executive Committee, Central Ohio Chapter, American Guild of Organists; and Math Club, Clintonville Woman's Club (president). An avid gardener, Shaffer chaired the Horticultural Sub-Committee, Columbus Department of Recreation and Parks, Northern Lions Club.

At the time of his death, Wave Henry Shaffer was survived by his wife Janet (Kindler) Ricket Shaffer whom he married December 1957; step-daughter, Janet Mary Ricket, Beaverton, OR; adopted sons, Frederick C. Shaffer, Tucson, AZ, and John M. Shaffer, Upper Arlington, OH; six grandchildren; brothers, Bruce Shaffer, Cincinnati, Byron Shaffer, Wauseon, and Donald Shaffer, Delta, OH. Funeral services were held 18 May 1995 at the Chapel of the Rutherford-Corbin Funeral Home, Columbus, OH, with the Reverend Robert Harris, Reverend Ken Shafer, and Dr. Leonard Confar officiating. Internment took place at Union Cemetery, Columbus, OH.

WILLIAM R. BURK

Gertrude Dolores (Heckman) Shay (1923-1996)

Gertrude Dolores (Heckman) Shay, age 73, Professor Emeritus of Biology and former Assistant Dean of The College of Arts and Sciences at the University of Dayton, died 29 August 1996 after a brief illness. A dedicated educator and well-informed administrator, Gertrude Shay garnered the respect and admiration of both students and academicians at the University of Dayton where she completed over 43 years of service. She was the principal author of *Laboratory Directions for Biology 101L and 102L*, published with revisions for many years by the University of Dayton Press and later by W.C. Brown. She joined The Ohio Academy of Science in 1964.

Gertrude Dolores (Heckman) Shay, born 25 March 1923 in Ottoville, OH, was the daughter of Louis and Sophia (Wannemacher) Heckman. After earning her diploma from Ottoville High School, Gertrude earned a BS (1945) at Mary Manse College and an MS in biology (1948) at the University of Detroit. Although she had considered entering medical school, Shay eventually accepted (1949) a teaching position in the Department of Biology, University of Dayton for one semester. The position, however, led her to a life-time career at Dayton. She advanced through the academic ranks from instructor to assistant professor (1953), associate professor (1956), professor (1984) and Professor Emeritus (1992), her year of retirement. Recognizing her teaching and administrative abilities, the university tapped her to become assistant dean of The College of Arts and Sciences (1986-1992).

In teaching Gertrude Shay believed in developing the whole person. Even outside the classroom she counseled and guided students. Well-known for her thorough and stimulating lectures, she served on numerous campus committees, providing her with a broad knowledge of University policies and assisting her as an administrator. In recognition of Professor Shay's contributions in education, she was awarded the Outstanding Teaching Award in The College of Arts and Sciences (1987) and the Lackner Award (1989) for contributing to the Catholic and Marianist character of the University of Dayton. She held membership in the Corpus Christi Catholic Church and in the Dayton Museum of Natural History.

At the time of her death, Gertrude Dolores (Heckman) Shay was survived by her daughter, Elizabeth Shay, York, PA; son, John Shay (and wife Catherine), Dayton, OH; one granddaughter; and sisters, Mary C. Heckman and Agnes Archdeacon, both of Ottoville, OH; and Margie Heiss, Delphos, OH. Professor Shay was predeceased by her husband Bernard Shay whom she married in 1958, brother, Paul J. Heckman, and sister, Dorothy Heckman. Following a prayer service held 3 September 1996 at Meyer-Boehmer & Feucht Funeral Home, was a Mass of Christian Burial at Corpus Christi Catholic Church, Dayton. Memorial contributions may be sent to Corpus Christi Catholic Church, 224 Squirrel Road, Dayton, OH 45405 or Hospice of Dayton, Inc., 324 Wilmington Avenue, Dayton, OH 45420-1891.

WILLIAM R. BURK